OBJECTIVES To examine the trends of the burden of hospitalization for acute myocardial infarction (AMI) in Beijing.

METHODS AMI hospitalization information came from Beijing Hospital Discharge Information System. Information of census registered population in Beijing was obtained from Beijing Municipal Bureau of statistics. All hospitalized cases with AMI from the year 2007 to 2012 were analyzed regarding hospitalization rate, in-hospital mortality, co-morbidities, the use of revascularization, and in-hospital cost. Trends of hospitalization rates and in-hospitalization mortality rates were examined by Poisson regression after adjusting for age and / or sex. Trends in prevalence of selected comorbidities over the study period were calculated using the modified Poisson regression after adjusting for age. Trends in hospital cost over time were calculated using multiple linear regression model after adjusting for age and / or sex.

RESULTS During 2007-2012, a total of 77943 patients hospitalized in Beijing with the primary discharge diagnosis of AMI were enrolled, of whom 67.5% were male. The AMI hospitalization rate experienced an increase from 80.5 per 100,000 to 120.4 per 100,000 (P<0.0001). Hospitalization rates of men were notably higher than those of women across the entire study period (P<0.0001), and the rates increased with age except for the age of 85 years and elder. The greatest increase were observed in men aged <54 years (42.9%) and in women aged 45-54 years (82.5%). There was a decline in in-hospital mortality over time from 11.0% in 2007 to 8.9% in 2012 (P=0.0001). In-hospital mortality rates were higher in women than those in men amongst patients at all age groups, except for those aged >85 years. Significant increasing trends were found for prevalence of hypertension, dyslipidemia, diabetes, atrial fibrillation, and renal failure from 2007 to 2012 (all P for trends <0.0001). The rate for percutaneous coronary intervention (PCI) was higher in men and increased among both sexes through the study period.

CONCLUSIONS During the study period the hospitalization rates for AMI increased especially for younger and middle-aged population, suggesting a greater need for intensive primary prevention efforts in the high-risk population in Beijing. However, a decline in in-hospital mortality was noticed during 2007 to 2012, indicating the improvement in the in-hospital treatment of AMI in Beijing.

The effect of sleep disorders on risk of myocardial infarction in male population aged 25-64 years (WHO MONICA–psychosocial)

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OBJECTIVES To examine the relationship between sleep disturbances (SD) and the risk development of myocardial infarction (MI) among men ages 25 to 64 years.

METHODS Within the framework of program, WHO MONICA- psychosocial was examined representative sample of men 25-64 years old (1994 year). Total sample was 657 persons. SD were measured at baseline with the use of the Jenkins’ questionnaire. Incidence of news cases of MI was revealed at 14-year follow-up. Cox- proportional regression model was used for an estimation of hazard ratio (HR).

RESULTS Only 1/3 of the 25 to 64-year old male subjects with the first MI referred to their sleep as “good”, whereas 2/3 had SD (63.1%). The risk of development of MI within 5 years at group of men with SD was 2.43 (95%CI 1.77-8.59) times higher than without it. For the following 10 years, risk of development of MI was 2.6 (95%CI 1.35-9.41) times higher in men with SD. Within 14 years HR=2.3 (95%CI 1.1-4.6); (p<0.05) Most frequently of MI occurred in men with SD and higher negative psychosocial factors, i.e. widowers, divorced, those with primary and not-completed secondary school education and those engaged in hard and moderate manual labor and head, with low index social network.

CONCLUSIONS The results demonstrate that SD present a social problem and contribute greatly to the risk of MI in men. The highest frequency of MI occurred in men and negative social gradient. Supported by Grant of Russian Foundation for Humanities No 140600227.
years. To evaluate cumulative risk burden throughout childhood or adulthood, the growth curve of BMI and BP for each individual were constructed using a mixed-effects model by SAS PROC MIXED within both childhood and adulthood. The area under the growth curve (AUC) was calculated by using an integral calculus formula to characterize the overall BMI and BP levels throughout childhood and adulthood.

**RESULTS** The tracking coefficient between childhood AUC and adult AUC of BMI (r = 0.635, P < 0.001) was greater than between initial childhood level and last adult level of BMIF (r = 0.575, P < 0.001). After adjusting sex and age at final adulthood, BMI at initial adulthood, at final adulthood, as childhood AUC, and as adult AUC were all associated with high cfPWV, high cIMT, and high LVMI at adulthood. After additionally controlling for covariates, four BMI measures still significantly related with high cIMT and high LVMI, but not with high cfPWV at adulthood. Both BMI measured at final adulthood and adult BMI were predictive of adult high cIMT and high LVMI, whereas neither BMI measured at final childhood nor as childhood AUC was associated with adult high cIMT and high LVMI. Subjects who were overweight in adulthood, irrespective of their childhood adiposity status, had significantly increased risks of high cIMT and high LVMI.

**CONCLUSIONS** Childhod adiposity is associated with carotid atherosclerosis and left ventricular hypertrophy at adulthood but not with arterial stiffness. However, reduction in weight from childhood to adulthood could attenuate and even eliminate the risk of subclinical CVD at adulthood.

**GW26-e0404**

**Optimal blood pressure in patients after stroke in rural areas of China**

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**OBJECTIVES** To our knowledge, no publication has estimated the association between average follow-up blood pressure (BP) and the risk of developing adverse events and/or mortality among stroke survivors in rural areas of China. The purpose of this study was to investigate the impact of different BP categories on risk of developing worse outcomes and evaluate the target range of BP in patients after stroke in rural areas of China.

**METHODS** We performed a post-hoc analysis of 1058 patients with a history of stroke or transient ischemic attack (TIA) from the NCRCHS. The average follow-up systolic blood pressure (SBP) and diastolic blood pressure (DBP) were categorized into 10 mm Hg increments. The primary outcome was a composite of death due to any cause, nonfatal coronary heart disease (CHD) and nonfatal stroke. The secondary outcomes were recurrent stroke, CVD events, CVD mortality, and all-cause mortality, considered separately.

**RESULTS** The relationship between BP (systolic and diastolic) followed a J- or U-shaped curve with primary and secondary outcomes, DBP < 70 mm Hg and DBP > 90 mm Hg were associated with increased risk of recurrent stroke and SBP > 160 mm Hg was associated with an increased risk of total CVD events. Both SBP < 110 mm Hg and SBP > 170 mm Hg significantly increased the risk of CVD and all-cause mortality. For DBP, compared with the reference group (DBP 110-119 mm Hg), SBP < 110 mm Hg and DBP > 150 mm Hg were significantly associated with an increased risk of primary outcome. For the secondary outcomes, SBP > 140 mm Hg was associated with an increased risk of recurrent stroke and SBP > 160 mm Hg was associated with an increased risk of total CVD events. Both SBP < 110 mm Hg and SBP > 170 mm Hg significantly increased the risk of CVD and all-cause mortality. For DBP, compared with the reference group (DBP 80-89 mm Hg), patients with DBP > 70 mm Hg or DBP > 90 mm Hg had a significantly increased risk of primary outcome. For the secondary outcomes, DBP > 90 mm Hg significantly increased the risk of both recurrent stroke and total CVD events. DBP > 70 mm Hg and DBP > 100 mm Hg were independently associated with an increased risk of CVD mortality. DBP > 70 mm Hg and DBP > 90 mm Hg were independently associated with an increased risk of all-cause mortality. Patients with SBP < 110 mm Hg or SBP > 140 mm Hg / DBP > 70 mm Hg or DBP > 90 mm Hg had significantly and independently increased risk of worse outcomes.

**CONCLUSIONS** For stroke survivors, a J- or U-shaped curve association exists between BP and the risk of future CVD events and mortality, with lowest event rates in the BP range of 110-119 mm Hg systolic and 80-89 mm Hg diastolic. SBP of 110-119 mm Hg and DBP of 70-89 mm Hg are the appropriate range for patients after stroke in rural areas of China.

**GW26-e0701**

**Arterial stiffness is increased in healthy subjects with a positive family history of hypertension**

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**OBJECTIVES** A positive family history of hypertension is a risk factor for cardiovascular diseases. In the present study, we investigated the value of pulse wave velocity (PWV) in healthy subjects with a positive family history of hypertension.

**METHODS** 255 healthy subjects (M/F: 75/180) were divided into two groups according to without (group 1) or with (group 2) a positive family history of hypertension. Carotid-femoral pulse wave velocity (cfPWV) was measured by a Doppler apparatus.

**RESULTS** Our results showed that CF-PWV was significantly higher in group 2 than in group 1 (9.87±1.64 vs 9.16±1.44 m/s, P<0.001). The levels of systolic blood pressure (SBP), pulse pressure and mean blood pressure (MAP) were significantly higher in group 1 than in group 2 (all P<0.05). High-density lipoprotein cholesterol (HDL-C) was significant lower in group 1 than in group 2 (P<0.05), but low-density lipoprotein cholesterol (LDL-C) was lower in group 1 than in group 2 (P=0.006). CF-PWV was negatively correlated with HDL-C (r = -0.142, P=0.026) even after adjusting for SBP and pulse pressure (r = -0.137, P=0.033). Multiple linear regressions showed that age, family history, HDL-C and MAP were independent influencing factors of CF-PWV in the entire study group.

**CONCLUSIONS** Our present study showed PWV is significantly higher in healthy subjects with a positive family history of hypertension. Family history might play an important role in this process. However, to be able to evaluate the prognostic value of PWV, prospective studies in families with hypertension are needed.